

IN THE ABSTRACT:

Delete lines 1 to 17, and insert:

ABSTRACT OF THE DISCLOSURE

A method of plasma etching, in particular of anisotropic plasma etching, of laterally defined structures in a silicon substrate, using a process gas, includes having at least one passivating material precipitated on the side walls of the laterally defined structures at least from time to time prior to and/or during etching. In an exemplary method, at least one of the compounds selected from the group ClF_3 , BrF_3 , or IF_5 is added to the process gas as a fluorine-delivering etching gas. In another exemplary method, NF_3 is added to the process gas, at least from time to time, as an additive consuming the passivating material. Finally, in another exemplary method, a light and easily ionizable gas, in particular H_2 , He , or Ne , is added, at least from time to time, to the process gas. The three exemplary methods may be combined.

IN THE CLAIMS:

On the first page of the claims, first line, change "Patent Claims" to:

--WHAT IS CLAIMED IS:--

Please cancel original claims 1 to 18, without prejudice, and please add new claims 19 to 36 as follows:

19. (New) A method of anisotropic plasma etching a laterally defined structure in a silicon substrate using a process gas, the method comprising the steps of:

precipitating at least one passivating material at least on a side wall of the laterally defined structure at least from time to time at least one of prior to the anisotropic plasma etching and during the anisotropic plasma etching; and

adding a fluorine-delivering etching gas at least from time to time to the process gas, the fluorine-delivering etching gas including at least a compound selected from the group of ClF_3 , BrF_3 and IF_5 .

20. (New) The method of claim 19, further comprising the step of adding at least one gas selected from the group of SiF_4 , C_4F_8 , C_5F_6 , C_4F_{10} , C_3F_8 and C_2F_6 to the process gas at least from time to time as a gas forming the at least one passivating material.